Legal Terms Highlighter AI - Complete Installation Guide

📦 Package Contents

Your extension package contains the following files:

```
legal-highlighter-ai/
├── manifest.json          # Extension configuration
├── content.js             # Main highlighting logic
├── background.js           # API integration service worker
├── styles.css             # Styling for highlights and tooltips
├── popup.html              # Settings popup interface
├── popup.js               # Settings popup functionality
├── legal-terms.json        # Local legal terms database
├── README.md               # Documentation
├── INSTALLATION_GUIDE.md      # This file
├── icon-generator.html        # Icon generation tool
└── icons/              # Extension icons
    ├── icon16.png
    ├── icon48.png
    └── icon128.png
```

🚀 Quick Start (5 Minutes)

Step 1: Generate Icons (2 minutes)

1. Open `icon-generator.html` in your web browser

2. Click **"Download All Icons"** button

3. Create an `icons` folder in your extension directory

4. Move the three downloaded PNG files into the `icons` folder

Step 2: Get API Keys (2 minutes)

OpenAI API Key:

1. Go to: https://platform.openai.com/api-keys

2. Sign up or log in

3. Click **"Create new secret key"**

4. Copy the key (starts with `sk-`)

5. Save it somewhere safe

Tavily API Key:

1. Go to: https://tavily.com

2. Sign up for free account

3. Navigate to your dashboard

4. Copy your API key (starts with `tvly-`)

Step 3: Install Extension (1 minute)

1. Open Chrome browser

2. Navigate to `chrome://extensions/`

3. Enable **"Developer mode"** (toggle in top-right corner)

4. Click **"Load unpacked"**

5. Select the `legal-highlighter-ai` folder

6. Extension icon should appear in your Chrome toolbar

Step 4: Configure API Keys (30 seconds)

1. Click the extension icon in Chrome toolbar

2. Paste your OpenAI API key

3. Paste your Tavily API key

4. Click **"Save API Keys"**

5. You should see "API keys saved successfully!"

✅ Verify Installation

1. Open any webpage (try Wikipedia's article on "Contract Law")

2. Look for highlighted terms (yellow background, red underline)

3. Hover over a highlighted term to see the tooltip

4. Press F12 and check Console tab for logged terms

If you see highlighted terms and tooltips work, you're all set! 🎉

🔧 Detailed Setup Instructions

Creating Icons (Alternative Method)

If the icon generator doesn't work, you can create simple placeholder icons:

1. Use any image editor (Paint, Photoshop, GIMP, etc.)

2. Create three square images with these dimensions:

   - 16x16 pixels → save as `icon16.png`

   - 48x48 pixels → save as `icon48.png`

   - 128x128 pixels → save as `icon128.png`

3. Use a simple scales of justice symbol or solid color

4. Save all three in the `icons/` folder

Testing the Extension

Test 1: Local Dictionary

- Visit a page and type/paste: "The judge made a verdict"

- Words "judge" and "verdict" should be highlighted

- Console should show: `judge` and `verdict`

Test 2: Dictionary API + AI

- Visit a page and type/paste: "The plaintiff filed litigation"

- Word "litigation" should be highlighted

- Hover to see AI-evaluated definition from dictionary

Test 3: Web Search Fallback

- Visit a page and type/paste: "IPC420 is a criminal offense"

- "IPC420" should be highlighted

- Hover to see definition from web search

Troubleshooting

Problem: Extension not loading

- Solution: Check that all files are in the correct folder

- Verify `manifest.json` is at the root level

- Check Chrome DevTools (F12) for error messages

Problem: No terms being highlighted

- Solution: Refresh the page after installing

- Check Console (F12) - should see "Legal terms highlighted on page" or "No Law related points"

- Verify `legal-terms.json` exists in extension folder

Problem: Tooltips show "Error loading definition"

- Solution: Check API keys are correctly entered

- Verify you have internet connection

- Check API keys have sufficient credits

- Look at Background Service Worker logs for detailed errors

Problem: Icons not showing

- Solution: Make sure icons are PNG format, not JPG

- Check icons are in `icons/` subfolder

- Verify filenames match exactly: `icon16.png`, `icon48.png`, `icon128.png`

Problem: API rate limits

- Solution: OpenAI free tier has rate limits

- Consider upgrading OpenAI account

- Definitions are cached, so same terms won't use API again

📋 System Requirements

- **Browser**: Chrome 88+ or any Chromium-based browser (Edge, Brave, Opera)

- **Internet**: Required for API calls (Dictionary, OpenAI, Tavily)

- **API Credits**:

  - OpenAI: ~$0.0015 per definition (GPT-3.5-Turbo)

  - Tavily: 1,000 free searches/month

- Dictionary API: Completely free

🔒 Privacy & Security

- API keys stored locally in Chrome's encrypted storage

- Keys never leave your computer except for API calls

- No tracking or analytics

- Definitions cached to minimize API usage

- Extension cannot access or modify data on other extensions

🛠️ Advanced Configuration

Adding More Terms to Local Database

Edit `legal-terms.json`:

```json
{
  "terms": {
    "arbitration": "A way to resolve disputes outside of court...",
    "your-new-term": "Your definition here"
  }
}
```

Detecting Custom Legal Codes

Edit `content.js`, find `legalPatterns` array:

```javascript
const legalPatterns = [
  /\bIPC\s*\d+[A-Z]?\b/gi,        // IPC420
  /\bSection\s*\d+[A-Z]?\b/gi,    // Section 302
  /\bYourPattern\b/gi             // Add your pattern
];
```

Changing Highlight Colors

Edit `styles.css`:

```css
css

.legal-term-highlight {
  background-color: #your-color;  /* Change highlight color */
  border-bottom: 2px solid #your-border-color;
}
```

📞 Getting Help

1. **Check Console Logs**: Press F12 → Console tab

2. **Background Service Worker**: chrome://extensions → Extension details → Inspect views: service worker

3. **Test with Simple Page**: Create a test HTML file with known legal terms

🎯 Usage Tips

1. **First Use**: The first definition lookup takes longer as it calls APIs

2. **Cached Definitions**: Subsequent lookups are instant

3. **Complex Terms**: IPC codes and sections are detected automatically

4. **Context Matters**: AI chooses legal definitions over general ones

📝 File Verification Checklist

Before loading the extension, verify:

- [ ] `manifest.json` exists at root level
- [ ] `content.js` exists at root level
- [ ] `background.js` exists at root level
- [ ] `styles.css` exists at root level
- [ ] `popup.html` exists at root level
- [ ] `popup.js` exists at root level
- [ ] `legal-terms.json` exists at root level
- [ ] `icons/icon16.png` exists
- [ ] `icons/icon48.png` exists
- [ ] `icons/icon128.png` exists

🔄 Updating the Extension

If you make changes to any files:

1. Go to `chrome://extensions/`

2. Click the refresh icon ↻ on your extension card

3. Reload any open tabs for changes to take effect

✨ Success Indicators

You'll know the extension is working when:

- ✅ Extension icon appears in Chrome toolbar

- ✅ Legal terms are highlighted on web pages

- ✅ F12 Console shows detected terms

- ✅ Hovering shows tooltip with definitions

- ✅ Popup opens when clicking extension icon

Need Help? Check the console logs (F12) for detailed error messages.

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